

Claims

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- [c1] A method of controlling a vehicle comprising: }
providing a driver subsystem and an active assist subsystem;
receiving at least one driver input into the driver subsystem from a driver of the vehicle;
outputting a driver output from the driver subsystem to the active assist subsystem, the driver output being derived from the at least one driver input;
providing at least one active assist program having at least one active input, the at least one active assist program having an on setting wherein the at least one active assist program outputs at least one active input and an off setting wherein the at least one active assist program does not output at least one active input; *Cruise control*
providing a vehicle control and implementation subsystem; and
inputting an intended driving demand from the active assist program into the vehicle control and implementation subsystem;
wherein the intended driving demand is derived from a combination of the at least one driver input and the at least one active input if the at least one active assist program is in the on setting and if the driver of the vehicle does not overrule the at least one active assist program, otherwise the intended driving demand is derived from the at least one driver input, such that the vehicle control and implementation subsystem cannot determine if its instructions come from the at least one driver input or the at least one active assist program.
- [c2] The method of controlling a vehicle of claim 1, further including:
inputting environmental data into the active assist subsystem.
- [c3] The method of controlling a vehicle of claim 2, wherein:
the at least one active input is derived from the environmental data.
- [c4] The method of controlling a vehicle of claim 1, wherein:
the at least one active assist program includes an adaptive cruise control program.
- [c5] The method of controlling a vehicle of claim 1, wherein:

the at least one active assist program includes a collision mitigation program.

- [c6] The method of controlling a vehicle of claim 1, wherein:
the intended driving demand includes a longitudinal acceleration demand.
- [c7] The method of controlling a vehicle of claim 1, wherein:
the intended driving demand includes a longitudinal velocity demand.
- [c8] The method of controlling a vehicle of claim 1, wherein:
the intended driving demand includes a yaw rate demand.
- [c9] The method of controlling a vehicle of claim 1, wherein:
the intended driving demand includes a slip angle demand.
- [c10] The method of controlling a vehicle of claim 1, wherein:
the intended driving demand includes a wheel angle demand.
- [c11] A vehicle control system comprising:
a driver subsystem receiving at least one driver input from a driver of the vehicle, the driver subsystem including a driver output outputting a driver output signal, the driver output signal being derived from the at least one driver input;
an active assist subsystem including an assist input receiving the driver output signal from the driver output of the driver subsystem, the active assist subsystem including at least one active assist program having at least one active input, the at least one active assist program having an on setting wherein the at least one active assist program outputs at least one active input and an off setting wherein the at least one active assist program does not output at least one active input, the at least one active assist subsystem including an assist output;
a vehicle control and implementation subsystem having a control input receiving an intended driving demand from the assist output of the active assist program;
wherein the intended driving demand is derived from a combination of the at least one driver input and the at least one active input if the at least one active assist program is in the on setting and if the driver of the vehicle does not

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overrule the at least one active assist program, otherwise the intended driving demand is derived from the at least one driver input, such that the vehicle control and implementation subsystem cannot determine if its instructions come from the at least one driver input or the at least one active assist program.

- [c12] The vehicle control system of claim 11, wherein:
the active assist subsystem receives environmental data.
- [c13] The vehicle control system of claim 12, wherein:
the at least one active input is derived from the environmental data.
- [c14] The vehicle control system of claim 11, wherein:
the at least one active assist program includes an adaptive cruise control program.
- [c15] The vehicle control system of claim 11, wherein:
the at least one active assist program includes a collision mitigation program.
- [c16] The vehicle control system of claim 11, wherein:
the intended driving demand includes a longitudinal acceleration demand.
- [c17] The vehicle control system of claim 11, wherein:
the intended driving demand includes a longitudinal velocity demand.
- [c18] The vehicle control system of claim 11, wherein:
the intended driving demand includes a yaw rate demand.
- [c19] The vehicle control system of claim 11, wherein:
the intended driving demand includes a slip angle demand.
- [c20] The vehicle control system of claim 11, wherein:
the intended driving demand includes a wheel angle demand.

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